



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2020-1033; Project Identifier MCAI-2020-01393-R;**

**Amendment 39-21622; AD 2021-13-17]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Airbus Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** The FAA is superseding Airworthiness Directive (AD) 2017-17-01, which applied to certain Airbus Helicopters Model AS332L2 and EC225LP helicopters.

AD 2017-17-01 required repetitive inspections of the main rotor blade (MRB) attachment pins. This AD continues to require the repetitive inspections of the MRB attachment pins, and also requires repetitive measurement of the attachment pin chamfer at certain intervals after corrosion removal, as specified in a European Aviation Safety Agency (now European Union Aviation Safety Agency) (EASA) AD, which is incorporated by reference. This AD was prompted by the FAA's determination that it is necessary to measure the attachment pin chamfer after corrosion removal, that replacement of an attachment pin after four corrosion removals is no longer necessary, and that all Airbus Helicopters Model AS332L2 and EC225LP helicopters are affected by the unsafe condition. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For material incorporated by reference (IBR) in this AD, contact the EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email: [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu); Internet: [www.easa.europa.eu](http://www.easa.europa.eu). You may find this material on the EASA website at <https://ad.easa.europa.eu>. You may view this material at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call 817-222-5110. It is also available in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1033.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1033; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Katherine Venegas, Aviation Safety Engineer, Cabin Safety, Mechanical and Environmental Systems Section, Los Angeles ACO Branch, FAA, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5353; email: [katherine.venegas@faa.gov](mailto:katherine.venegas@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Background**

The EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2018-0172, dated August 7, 2018 (EASA AD 2018-0172) (also referred to as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for all Airbus Helicopters Model AS332L2 and EC225LP helicopters. EASA AD 2018-0172 superseded EASA AD 2015-0016, dated January 30, 2015 (which prompted FAA AD 2017-17-01, Amendment 39-18991 (82 FR 39506, August 21, 2017) (AD 2017-17-01)).

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2017-17-01. AD 2017-17-01 applied to certain Airbus Helicopters Model AS332L2 and EC225LP helicopters. The NPRM published in the *Federal Register* on November 24, 2020 (85 FR 74931). The NPRM was prompted by the FAA's determination that it is necessary to measure the attachment pin chamfer after corrosion removal, that replacement of an attachment pin after four corrosion removals is no longer necessary, and that all Airbus Helicopters Model AS332L2 and EC225LP helicopters are affected by the unsafe condition. The NPRM proposed to continue to require the repetitive inspections of the MRB attachment pins, as specified in an EASA AD. The NPRM also proposed to require repetitive measurement of the attachment pin chamfer at certain intervals after corrosion removal, as specified in an EASA AD.

The FAA is issuing this AD to address cracked MRB attachment pins which could result in loss of an MRB and subsequent loss of control of the helicopter. See the MCAI for additional background information.

## **Comments**

The FAA gave the public the opportunity to participate in developing this final rule. The following presents the comments received on the NPRM and the FAA's response to each comment.

### **Request to Allow Rework of Corrosion Pits**

Air Center Helicopters, Inc. (ACH) and Airbus Helicopters (AH) requested that the FAA allow rework of corrosion pits. ACH disagreed with the FAA's determination to disallow blade pin rework, and stated that scrapping blade pins due to disallowing rework is fiscally irresponsible, due to substantial replacement costs (each main rotor hub has 10 blade pins). ACH pointed out that since the FAA issued AD 2017-17-01, ACH has removed and reworked numerous corrosion pitted EC225 blade pins from service in accordance with Airbus Helicopters Alert Service Bulletin EC225-05A040. ACH discussed that in many cases the corrosion pitting was nearly undetectable using 10X magnification, and that additional inspections were done using a 0.005 inch ball gauge. ACH also mentioned that visible corrosion pitting was often undetectable using the ball gauge, and pointed out that to ACH, the undetectable corrosion pitting indicated that the blade pin was salvageable with a minimum of rework.

ACH agreed with not allowing blade pin rework in FAA AD 2017-17-01 because Revision 0 of Airbus Helicopters Alert Service Bulletin EC225-05A040 did not specify a method to determine dimensional airworthiness after rework. ACH stated that Revision 1 of Airbus Helicopters Alert Service Bulletin EC225-05A040, included post rework inspection procedures and dimensional criteria for post rework blade pin airworthiness, and that Revision 2 of Airbus Helicopters Alert Service Bulletin EC225-05A040 introduced a maximum radius to the caliper points of 0.6 mm (0.0236 inch) to ensure the point seats properly within the external blade pin blend radius ensuring accurate wall thickness measurements. ACH specified that Airbus Helicopters Alert Service Bulletin

EC225-05A040 provides a definitive procedure for inspection and verification of blade pin airworthiness after corrosion pitting rework, and that the procedure was approved by EASA.

ACH and AH argued that the term “corrosion” in Airbus Helicopters Alert Service Bulletin EC225-05A040, is intended to include corrosion pitting. AH pointed out that the service information is currently at Revision 2, that the revision was based on research and feedback from customer reports, and implemented detailed inspection procedures and measurements to determine airworthiness of the blade pins. AH then stated that the FAA did not reflect the intentions of the latest service information.

The FAA disagrees with the request. Although the MCAI and service information specify rework in case corrosion is found, neither clearly address action in the case of corrosion pitting. Corrosion pitting is different than uniform corrosion and can be more dangerous. Additionally, the FAA does not agree with the inference that the intention of the service information is to allow rework of corrosion pits. The FAA has not revised this AD in this regard.

## **Conclusion**

The FAA reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule as proposed, except for minor editorial changes. The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

## **Related Service Information Under 1 CFR Part 51**

EASA AD 2018-0172 specifies procedures for repetitive inspections for corrosion and cracking of the attachment pins and corrective actions if necessary, and repetitive conditional measurement of the thickness of the chamfer of the attachment pins at certain intervals after corrosion removal. Corrective actions include corrosion removal and replacement of the attachment pins. This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

## **Differences Between this Proposed AD and the MCAI**

EASA AD 2018-0172 requires an inspection of the affected part in accordance with the applicable service information. The service information for Model AS332L2 helicopters and the service information for Model EC225LP helicopters both describe procedures for an inspection for corrosion and cracking of the attachment pins. However, the service information for Model AS332L2 helicopters also describes an inspection of the protective coating of each attachment pin for scratches and missing protective coating and sanding if necessary; the service information for Model EC225LP helicopters does not describe those actions.

Although EASA AD 2018-0172 requires corrective actions if there is corrosion or cracking of the attachment pins, EASA AD 2018-0172 does not require any corrective actions if there is any scratch or any missing protective coating.

This AD requires inspecting the protective coating of each attachment pin for scratches and missing protective coating, and sanding if there is any scratch or any missing protective coating, for all affected helicopters.

EASA AD 2018-0172 requires removing corrosion but does not provide a corrective action if there are corrosion pits. This AD requires replacing an attachment pin that has any corrosion pitting.

The service information referenced in EASA AD 2018-0172 specifies to do a non-destructive inspection if in doubt about whether there is a crack; that action is not required by this AD.

The service information referenced in EASA AD 2018-0172 specifies contacting Airbus Helicopters if any attachment pin with a crack is found and returning that part to Airbus Helicopters; those actions are not required by this AD.

### **Costs of Compliance**

The FAA estimates that this AD affects 28 helicopters of U.S. registry. The FAA estimates the following costs to comply with this AD:

#### **Estimated costs for required actions**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Retained actions from AD 2017-17-01	1 work-hour X \$85 per hour = \$85 per inspection cycle	\$0	\$85 per inspection cycle	\$2,380 per inspection cycle

The FAA estimates the following costs to do any necessary on-condition measurements (new action), corrosion removal, and replacements that would be required based on the results of any required actions. The FAA has no way of determining the number of helicopters that might need these on-condition measurements, corrosion removal, and replacements:

#### **Estimated costs of on-condition actions**

<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>
Up to 11 work-hours X \$85 per hour = Up to \$935	Up to \$5,720	Up to \$6,655

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator.

Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:



Authority: 49 U.S.C. 106(g), 40113, 44701.

**§ 39.13 [Amended]**

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive 2017-17-01, Amendment 39-18991

(82 FR 39506, August 21, 2017); and

b. Adding the following new airworthiness directive:

**2021-13-17 Airbus Helicopters:** Amendment 39-21622; Docket No. FAA-2020-1033;

Project Identifier MCAI-2020-01393-R.

**(a) Effective Date**

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

This AD removes AD 2017-17-01, Amendment 39-18991 (82 FR 39506, August 21, 2017) (AD 2017-17-01).

**(c) Applicability**

This AD applies to all Airbus Helicopters Model AS332L2 and EC225LP helicopters, certificated in any category.

**(d) Subject**

Joint Aircraft System Component (JASC) Codes 6200, Main Rotor System.

**(e) Reason**

This AD was prompted by a report of three cracked main rotor blade (MRB) attachment pins. The FAA is issuing this AD to address cracked MRB attachment pins which could result in loss of an MRB and subsequent loss of control of the helicopter.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

## **(g) Requirements**

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, European Aviation Safety Agency (now European Union Aviation Safety Agency) (EASA) AD 2018-0172, dated August 7, 2018 (EASA AD 2018-0172).

## **(h) Exceptions to EASA AD 2018-0172**

(1) Where EASA AD 2018-0172 refers to its effective date, this AD requires using the effective date of this AD.

(2) Where EASA AD 2018-0172 refers to February 13, 2015 (the effective date of EASA AD 2015-0016, dated January 30, 2015), this AD requires using September 25, 2017 (the effective date of AD 2017-17-01).

(3) The “Remarks” section of EASA AD 2018-0172 does not apply to this AD.

(4) Where paragraph (1) of EASA AD 2018-0172 specifies to inspect each affected part, for this AD, prior to the inspection for corrosion, inspect the protective coating on the inside of the attachment pin for scratches and missing protective coating. If there is any scratch or any missing protective coating, prior to the inspection for corrosion, sand the attachment pin to remove the varnish in the area depicted as “Area A” in Figure 1 of the “applicable ASB” as defined in EASA AD 2018-0172.

(5) Where paragraph (3) of EASA AD 2018-0172 requires removing corrosion, for this AD, if there is any corrosion pitting, before further flight, replace the affected attachment pin. Do not sand the attachment pin to remove a corrosion pit.

(6) Although the service information referenced in EASA AD 2018-0172 specifies to do a non-destructive inspection if in doubt about whether there is a crack, that action is not required by this AD.

(7) Although the service information referenced in EASA AD 2018-0172 specifies contacting Airbus Helicopters if any attachment pin with a crack is found and returning that part to Airbus Helicopters, those actions are not required by this AD.

(8) Although the service information referenced in EASA AD 2018-0172 specifies discarding certain parts, that action is not required by this AD.

(9) Where EASA AD 2018-0172 refers to flight hours (FH), this AD requires using hours time-in-service.

**(i) Special Flight Permit**

Special flight permits, as described in 14 CFR 21.197 and 21.199, are not allowed.

**(j) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (k) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(k) Related Information**

For more information about this AD, contact Katherine Venegas, Aviation Safety Engineer, Cabin Safety, Mechanical and Environmental Systems Section, Los Angeles ACO Branch, FAA, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5353; email: katherine.venegas@faa.gov.

## **(I) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) European Aviation Safety Agency (EASA) AD 2018-0172, dated August 7, 2018.

(ii) [Reserved]

(3) For EASA AD 2018-0172, contact the EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email: [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu); Internet: [www.easa.europa.eu](http://www.easa.europa.eu). You may find this EASA AD on the EASA website at <https://ad.easa.europa.eu>.

(4) You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call 817-222-5110. This material may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1033.

(5) You may view this material that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email [fedreg.legal@nara.gov](mailto:fedreg.legal@nara.gov), or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on June 17, 2021.

Gaetano A. Sciortino, Deputy Director for Strategic Initiatives,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

